Fermi National Accelerator Laboratory
Batavia, IL 60510

MQTM TRIM MAGNET
INCOMING INSPECTION TRAVELER

Reference Drawing (s):
ME-351349

Project # / Task #:20/20.22.1.1.8.1	**Job #:197**
Released by: Bob Jensen	**Magnet / Device Series: MQTM**
Date:9/18/03 2:37:48 PM	**Scan Pages:** 9
Prepared by: M. Cullen	

Title	Signature	Date
TD / E&F Process Engineering	**Bob Jensen** Bob Jensen / Designee	**6/19/03**
TD / E&F Assembly	**Dan Smith** Dan Smith / Designee	**6/19/03**
TD / E&F Project Engineer	**Alexander Makarov** Alexander Makarov / Designee	**6/19/03**
TD / E&F Project Manager	**John Carson** John Carson / Designee	**6/19/03**

Revision Page

Revision	Step No.	Revision Description	TRR No.	Date
None	N/A	Initial Release	N/A	11/7/02
A	4.1	Only perform complete magnet electrical inspection.	1560	6/17/03

Ensure appropriate memos and specific instructions are placed with the traveler before issuing the sub traveler binder to production.

1.0 General Notes

1.1 White (Lint Free) Gloves (Fermi stock 2250-1800) or Surgical Latex Gloves (Fermi stock 2250-2494) shall be worn by all personnel when handling all product parts after the parts have been prepared/cleaned.

1.2 All steps that require a sign-off shall include the Technician/Inspectors first initial and full last name.

1.3 No erasures or white out will be permitted to any documentation. All incorrectly entered data shall be corrected by placing a single line through the error, initial and date the error before adding the correct data.

1.4 All Discrepancy Reports issued shall be recorded in the left margin next to the applicable step.

1.5 All personnel performing steps in this traveler must have documented training for this traveler and associated operating procedures.

1.6 Personnel shall perform all tasks in accordance with current applicable ES&H guidelines and those specified within the step.

1.7 Cover the magnet assembly with green Herculite (Fermi stock 1740-0100) when not being serviced or assembled.

2.0 Parts Kit List

2.1 No Part Kit required.

3.0 Magnet Acceptance

3.1 Update DSR Keywords (Location [IB2], Location Verified Date & Status [awaiting E&F completion]) and make entry regarding work to be performed.

Lead Person _____ Date 9/19/03

3.2 Verify that the 2 digits of the serial number stamped on the magnet matches the last 2 digits of the serial number at the bottom of this traveler. Record any serial numbers visible on the magnet. Visually inspect magnet for damage. If any out of the ordinary conditions exists notify your supervisor.

Lead Person _____ Date 9-19-03

4.0 Initial Coil/Magnet Inspection

4.1 Perform an Electrical.

Magnet	Equipment Serial Number	Limit	Actual Measurement	Pass	Fail	Out of Tolerance
Resistance	32-1005	1.5 to 1.8 Ω	1.666 Ω	✓		
LS @ 1 KHz	B4619	65 to 75 mH	70.1 mH	✓		
Q @ 1 KHz		40-50	41.2	✓		
LS @ 100 Hz		Reference Test Only Not Subject to Limit Values	70.3 mH			
Q @ 100 Hz		Reference Test Only Not Subject to Limit Values	25.0			
100 Volt Ring	P60000			✓		
Hipot Coil to Core	ALOSCA	< 5 µA @ 500 V	< .1	✓		

D. Coe
Inspector

9-19-03
Date

5.0 Close Out

5.1 Stencil the serial number and weight (Lbs.) 1" characters centered on side of the magnet.

Note(s):
The serial numbers should match serial number at the bottom of this traveler.

EXAMPLE

SERIAL NUMBER
MAGNET WEIGHT

Technician(s) _____ Date 9/20/03

5.2 Update DSR Keywords (Location, Location Verified Date & Status) and make entry regarding work preformed. Change Staus to Ready to use

Lead Person _____ Date 9/20/03

5.3 Affix the completed Generic Magnet Identification Labels (MA-318490) (Qty. 1) on the magnet on the aisle side. Affix a completed Generic Magnet Identification Label (MA-318490) to this page.

Fermi National Accelerator Laboratory
Technical Division

MQTM Trim Quadrupole

Serial No: MQTM131-0 **Drawing No:** ME-351349 **Magnet Weight:** 226 Lbs

	DC Resistance:	Ls @ 1kHz:	Q @ 1kHz:	Ls @ 100Hz:	Q @ 100Hz:	HiPot Coil To Core @ 500VDC
Upper Coil:	N/A mΩ	N/A mH	N/A	N/A mH	N/A	N/A μA
Lower Coil:	N/A mΩ	N/A mH	N/A	N/A mH	N/A	N/A μA
Full Magnet:	1.66 Ω	70.1 mH	41.2	70.3 mH	25.0	<.1 μA

Previous Serial No(s):

Remarks: Mfg MM/YY by Moscow Radio Technical Institute, Moscow, Russia. **Date Completed:** 9/22/2003

Partially Completed
Generic Magnet Identification Label (MA-318490)

Bob _____ Inspector

9/22/03 Date

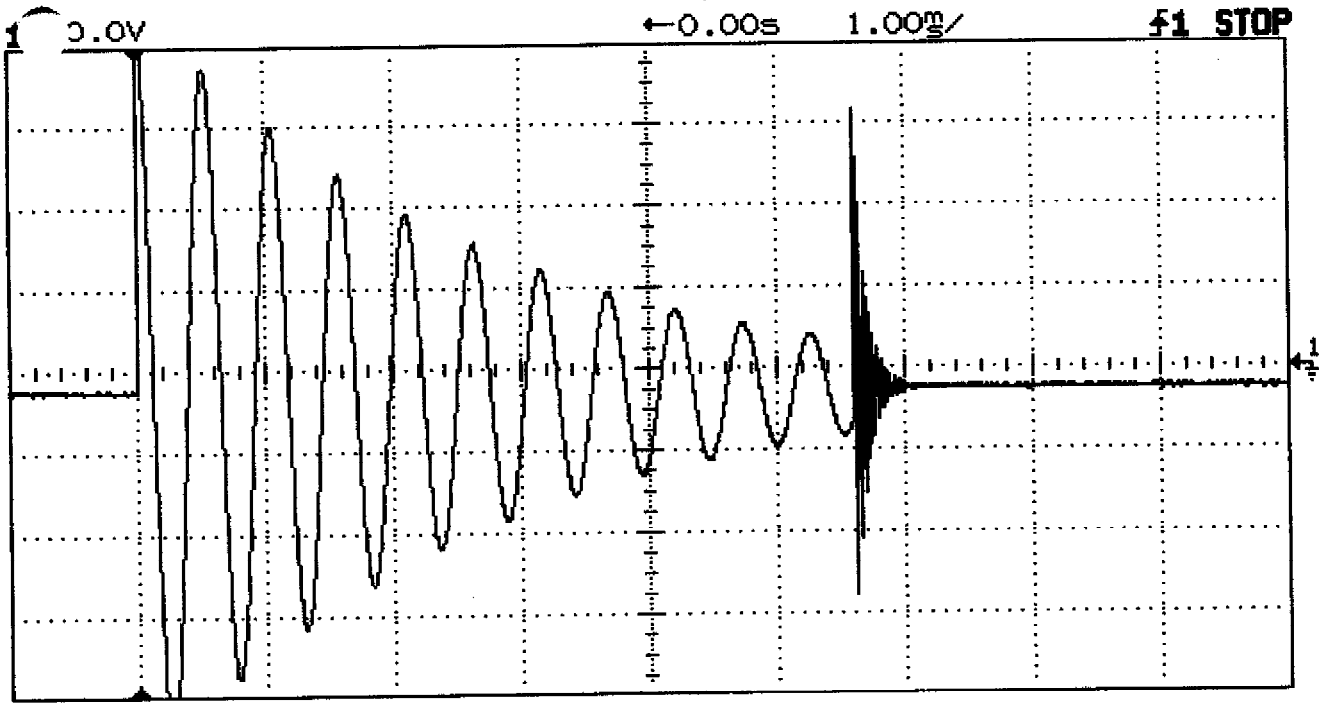
6.0 Production Complete

6.1 Process Engineering verify that the Traveler is accurate and complete. This shall include a review of all steps to ensure that all operations have been completed and signed off. Ensure that all Discrepancy Reports, Nonconformance Reports, Repair/Rework Forms, Deviation Index and dispositions have been reviewed by the Responsible Authority for conformance before being approved.

Comments:

Process Engineering/Designee — Date: 9/22/03

10:19:22 Fri Sep 19, 2003



	State	Volts/Div	Position	Cplg	BW Lim	Inv	Probe
Chan 1	On	20.00 V	0.000 V	DC	Off	Off	10:1
Chan 2	Off	100.0mV	0.000 V	DC	Off	Off	1:1

	Mode	Main Time/Div	Main Delay	Time Ref	Delayed Time/Div	Delayed Delay
Horizontal	Normal	1.000ms/	0.000 s	Left	--------	-----

Trigger	Mode	Source	Level	Holdoff	Slope	Couplg	Reject	NoiseRej
	Normal	Ch 1	3.750 V	200.0ns	Pos	DC	HF	On

Display Mode: Normal

Traveler	333703 RA
Step #	4.1
Magnet Serial Number	MGTM131-0
Technician	D.Gde
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